

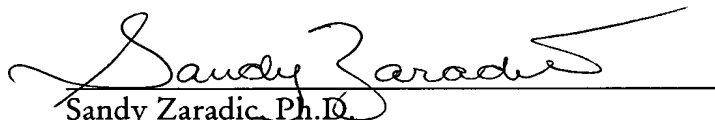
Applicant's Reference: DX01042X

Title of Invention: MAMMALIAN CYTOKINES; RELATED REAGENTS
AND METHODS

Applicant(s): Birgit Oppmann, Rene De Waal Malefyt,
Donna M. Rennick, Robert A. Kastelein,
Maria T. Wiekowski, Sergio A. Lira,
Satwant K. Narula,

Sequence Listing Statement

The undersigned attorney for applicant hereby declares that the information recorded on the diskette is identical in content to the information in the written Sequence Listing.


Sandy Zaradic, Ph.D.
Patent Agent
Registration No. 45997

SEQUENCE LISTING

<110> De Waal Malefyt, Rene
 Kastelein, Robert A.
 Lira, Sergio A.
 Narula, Satwant
 Oppmann, Birgit
 Rennick, Donna M.
 Wiekowski, Maria

<120> Mammalian Cytokines; Related Reagents and Methods

<130> DX01042X US

<140>

<141>

<150> 09/393,090

<151> 1999-09-09

<150> 60/164,616

<151> 1999-11-10

<160> 5

<170> PatentIn Ver. 2.1

<210> 1

<211> 570

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: surmised Homo sapiens

<220>

<221> CDS

<222> (1)..(567)

<220>

<221> mat_peptide

<222> (64)..(567)

<400> 1

atg	ctg	ggg	agc	aga	gct	gta	atg	ctg	ctg	ttg	ctg	ctg	ccc	tgg	aca	48
Met	Leu	Gly	Ser	Arg	Ala	Val	Met	Leu	Leu	Leu	Leu	Leu	Pro	Trp	Thr	
	-20					-15						-10				

gct	cag	ggc	aga	gct	gtg	cct	ggg	ggc	agc	agc	cct	gcc	tgg	act	cag	96
Ala	Gln	Gly	Arg	Ala	Val	Pro	Gly	Gly	Ser	Ser	Pro	Ala	Trp	Thr	Gln	
	-5			-1	1				5					10		

tgc	cag	cag	ctt	tca	cag	aag	ctc	tgc	aca	ctg	gcc	tgg	agt	gca	cat	144
Cys	Gln	Gln	Leu	Ser	Gln	Lys	Leu	Cys	Thr	Leu	Ala	Trp	Ser	Ala	His	
			15				20						25			

cca	cta	gtg	gga	cac	atg	gat	cta	aga	gaa	gag	gga	gat	gaa	gag	act	192
Pro	Leu	Val	Gly	His	Met	Asp	Leu	Arg	Glu	Glu	Gly	Asp	Glu	Glu	Thr	
		30					35					40				

aca aat gat gtt ccc cat atc cag tgt gga gat ggc tgt gac ccc caa 240
 Thr Asn Asp Val Pro His Ile Gln Cys Gly Asp Gly Cys Asp Pro Gln
 45 50 55
 gga ctc agg gac aac agt cag ttc tgc ttg caa agg atc cac cag ggt 288
 Gly Leu Arg Asp Asn Ser Gln Phe Cys Leu Gln Arg Ile His Gln Gly
 60 65 70 75
 ctg att ttt tat gag aag ctg cta gga tcg gat att ttc aca ggg gag 336
 Leu Ile Phe Tyr Glu Lys Leu Leu Gly Ser Asp Ile Phe Thr Gly Glu
 80 85 90
 cct tct ctg ctc cct gat agc cct gtg gcg cag ctt cat gcc tcc cta 384
 Pro Ser Leu Leu Pro Asp Ser Pro Val Ala Gln Leu His Ala Ser Leu
 95 100 105
 ctg ggc ctc agc caa ctc ctg cag cct gag ggt cac cac tgg gag act 432
 Leu Gly Leu Ser Gln Leu Leu Gln Pro Glu Gly His His Trp Glu Thr
 110 115 120
 cag cag att cca agc ctc agt ccc agc cag cca tgg cag cgt ctc ctt 480
 Gln Gln Ile Pro Ser Leu Ser Pro Ser Gln Pro Trp Gln Arg Leu Leu
 125 130 135
 ctc cgc ttc aaa atc ctt cgc agc ctc cag gcc ttt gtg gct gta gcc 528
 Leu Arg Phe Lys Ile Leu Arg Ser Leu Gln Ala Phe Val Ala Val Ala
 140 145 150 155
 gcc cgg gtc ttt gcc cat gga gca gca acc ctg agt ccc taa 570
 Ala Arg Val Phe Ala His Gly Ala Ala Thr Leu Ser Pro
 160 165

<210> 2

<211> 189

<212> PRT

<213> Unknown Organism

<223> Description of Unknown Organism: surmised Homo sapiens

<400> 2

Met Leu Gly Ser Arg Ala Val Met Leu Leu Leu Leu Leu Pro Trp Thr
-20 -15 -10

Ala Gln Gly Arg Ala Val Pro Gly Gly Ser Ser Pro Ala Trp Thr Gln
-5 -1 1 5 10

Cys Gln Gln Leu Ser Gln Lys Leu Cys Thr Leu Ala Trp Ser Ala His
15 20 25

Pro Leu Val Gly His Met Asp Leu Arg Glu Glu Gly Asp Glu Glu Thr
30 35 40

Thr Asn Asp Val Pro His Ile Gln Cys Gly Asp Gly Cys Asp Pro Gln
45 50 55

Gly Leu Arg Asp Asn Ser Gln Phe Cys Leu Gln Arg Ile His Gln Gly
60 65 70 75

Leu Ile Phe Tyr Glu Lys Leu Leu Gly Ser Asp Ile Phe Thr Gly Glu
80 85 90

<400> 3																
cgcttagaag	tcggactaca	gagtttagact	cagaaccaaa	ggaggtggat	aggggggtcca	60										
caggcctggt	gcagatcaca	gagccagcca	gatctgagaa	gcaggggaaca	ag atg ctg	118										
					Met Leu											
					-20											
gat tgc aga gca gta ata atg cta tgg ctg ttg ccc tgg gtc act cag	166															
Asp Cys Arg Ala Val Ile Met Leu Trp Leu Leu Pro Trp Val Thr Gln																
-15 -10 -5																
ggc ctg gct gtg cct agg agt agc agt cct gac tgg gct cag tgc cag	214															
Gly Leu Ala Val Pro Arg Ser Ser Ser Pro Asp Trp Ala Gln Cys Gln																
-1 1 5 10																
cag ctc tct cgg aat ctc tgc atg cta gcc tgg aac gca cat gca cca	262															
Gln Leu Ser Arg Asn Leu Cys Met Leu Ala Trp Asn Ala His Ala Pro																
15 20 25																
gcg gga cat atg aat cta cta aga gaa gaa gag gat gaa gag act aaa	310															
Ala Gly His Met Asn Leu Leu Arg Glu Glu Glu Asp Glu Glu Thr Lys																
30 35 40 45																
aat aat gtg ccc cgt atc cag tgt gaa gat ggt tgt gac cca caa gga	358															
Asn Asn Val Pro Arg Ile Gln Cys Glu Asp Gly Cys Asp Pro Gln Gly																
50 55 60																

gat	tgc	aga	gca	gta	ata	atg	cta	tgg	ctg	ttg	ccc	tgg	gtc	act	cag	166
Asp	Cys	Arg	Ala	Val	Ile	Met	Leu	Trp	Leu	Leu	Pro	Trp	Val	Thr	Gln	
				-15					-10					-5		
ggc	ctg	gct	gtg	cct	agg	agt	agc	agt	cct	gac	tgg	gct	cag	tgc	cag	214
Gly	Leu	Ala	Val	Pro	Arg	Ser	Ser	Ser	Pro	Asp	Trp	Ala	Gln	Cys	Gln	
		-1	1				5					10				
cag	ctc	tct	cgg	aat	ctc	tgc	atg	cta	gcc	tgg	aac	gca	cat	gca	cca	262
Gln	Leu	Ser	Arg	Asn	Leu	Cys	Met	Leu	Ala	Trp	Asn	Ala	His	Ala	Pro	
	15					20					25					
gcg	gga	cat	atg	aat	cta	cta	aga	gaa	gaa	gag	gat	gaa	gag	act	aaa	310
Ala	Gly	His	Met	Asn	Leu	Leu	Arg	Glu	Glu	Glu	Asp	Glu	Glu	Thr	Lys	
30				35						40					45	
aat	aat	gtg	ccc	cgt	atc	cag	tgt	gaa	gat	ggt	tgt	gac	cca	caa	gga	358
Asn	Asn	Val	Pro	Arg	Ile	Gln	Cys	Glu	Asp	Gly	Cys	Asp	Pro	Gln	Gly	
				50					55					60		

```

ctc aag gac aac agc cag ttc tgc ttg caa agg atc cgc caa ggt ctg 406
Leu Lys Asp Asn Ser Gln Phe Cys Leu Gln Arg Ile Arg Gln Gly Leu
      65              70              75

gct ttt tat aag cac ctg ctt gac tct gac atc ttc aaa ggg gag cct 454
Ala Phe Tyr Lys His Leu Leu Asp Ser Asp Ile Phe Lys Gly Glu Pro
      80              85              90

gct cta ctc cct gat agc ccc atg gag caa ctt cac acc tcc cta cta 502
Ala Leu Leu Pro Asp Ser Pro Met Glu Gln Leu His Thr Ser Leu Leu
      95              100             105

gga ctc agc caa ctc ctc cag cca gag gat cac ccc cgg gag acc caa 550
Gly Leu Ser Gln Leu Leu Gln Pro Glu Asp His Pro Arg Glu Thr Gln
     110              115             120             125

cag atg ccc agc ctg agt tct agt cag cag tgg cag cgc ccc ctt ctc 598
Gln Met Pro Ser Leu Ser Ser Ser Gln Gln Trp Gln Arg Pro Leu Leu
      130             135             140

cgt tcc aag atc ctt cga agc ctc cag gcc ttt ttg gcc ata gct gcc 646
Arg Ser Lys Ile Leu Arg Ser Leu Gln Ala Phe Leu Ala Ile Ala Ala
      145             150             155

cgg gtc ttt gcc cac gga gca gca act ctg act gag ccc tta gtg cca 694
Arg Val Phe Ala His Gly Ala Ala Thr Leu Thr Glu Pro Leu Val Pro
      160             165             170

aca gct taaggatgcc caggttccca tggctaccat gataagacta atctatcagc 750
Thr Ala
     175

ccagacatct accagttaat taaccatta ggacttgtgc tgttcttggt tcgtttgttt 810

tgcgtgaagg gcaaggacac cattattaaa gagaaaagaa acaaacccca gagcaggcag 870

ctggctagag aaaggagctg gagaagaaga ataaagtctc gagcccttgg ccttggaagc 930

gggcaagcag ctgcgtggcc tgaggggaag ggggcggtgg catcgagaaa ctgtgagaaa 990

accagagca tcagaaaaag tgagcccagg ctttggccat tatctgtaag aaaaacaaga 1050

aaaggggaac attatacttt cctgggtggc tcagggaaat gtgcagatgc acagtactcc 1110

agacagcagc tctgtacctg cctgctctgt cctcagttc taacagaatc tagtcactaa 1170

gaactaacag gactaccaat acgaactgac aaa 1203

```

<210> 4

<211> 196

<212> PRT

<213> Unknown Organism

<223> Description of Unknown Organism: surmised Mus sp.

<400> 4

```

Met Leu Asp Cys Arg Ala Val Ile Met Leu Trp Leu Leu Pro Trp Val
  -20              -15              -10

```

```

Thr Gln Gly Leu Ala Val Pro Arg Ser Ser Ser Pro Asp Trp Ala Gln
  -5              -1   1              5              10

```

Cys Gln Gln Leu Ser Arg Asn Leu Cys Met Leu Ala Trp Asn Ala His
 15 20 25
 Ala Pro Ala Gly His Met Asn Leu Leu Arg Glu Glu Glu Asp Glu Glu
 30 35 40
 Thr Lys Asn Asn Val Pro Arg Ile Gln Cys Glu Asp Gly Cys Asp Pro
 45 50 55
 Gln Gly Leu Lys Asp Asn Ser Gln Phe Cys Leu Gln Arg Ile Arg Gln
 60 65 70 75
 Gly Leu Ala Phe Tyr Lys His Leu Leu Asp Ser Asp Ile Phe Lys Gly
 80 85 90
 Glu Pro Ala Leu Leu Pro Asp Ser Pro Met Glu Gln Leu His Thr Ser
 95 100 105
 Leu Leu Gly Leu Ser Gln Leu Leu Gln Pro Glu Asp His Pro Arg Glu
 110 115 120
 Thr Gln Gln Met Pro Ser Leu Ser Ser Ser Gln Gln Trp Gln Arg Pro
 125 130 135
 Leu Leu Arg Ser Lys Ile Leu Arg Ser Leu Gln Ala Phe Leu Ala Ile
 140 145 150 155
 Ala Ala Arg Val Phe Ala His Gly Ala Ala Thr Leu Thr Glu Pro Leu
 160 165 170
 Val Pro Thr Ala
 175

<210> 5

<211> 102

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: surmised Sus sp.

<400> 5

Ser Cys Leu Gln Arg Ile His Gln Gly Leu Val Phe Tyr Glu Lys Leu
 1 5 10 15
 Leu Gly Ser Asp Ile Phe Thr Gly Glu Pro Ser Leu His Pro Asp Gly
 20 25 30
 Ser Val Gly Gln Leu His Ala Ser Leu Leu Gly Leu Arg Gln Leu Leu
 35 40 45
 Gln Pro Glu Gly His His Trp Glu Thr Glu Gln Thr Pro Ser Pro Ser
 50 55 60
 Pro Ser Gln Pro Trp Gln Arg Leu Leu Leu Arg Leu Lys Ile Leu Arg
 65 70 75 80
 Ser Leu Gln Ala Phe Val Ala Val Ala Ala Arg Val Phe Ala His Gly

